

IN THE CLAIMS:

Please AMEND the following claims:

7. (AMENDED) A system for controlling as set forth in claim 3, wherein said controller controls the power supplied from the external power source to the rechargeable batteries by determining if either of the [detector] detectors detects a negative difference thus indicating that the charging current exceeds a maximum or the output voltage is less [then] than a minimum,

wherein if either of the [detector] detectors detects a negative difference, the controller selects the largest negative difference and controls the charging current to increase the largest negative difference to a zero difference, and wherein if neither of the [detector] detectors detects a negative difference, the controller selects the largest positive difference and controls the charging current to decrease the largest positive difference to a zero difference.

8. (AMENDED) A system for controlling as set forth in claim 4, wherein said controller controls the power supplied from the external power source to the rechargeable batteries by determining if any of the [detector] detectors detects a negative difference thus indicating that a current or a voltage is greater than a maximum or less than a minimum, wherein if any of the [detector] detectors detects a negative difference, the controller selects the largest negative difference and controls the charging current to increase the largest negative difference to a zero difference, and wherein if none of the [detector] detectors detects a negative difference, the controller selects the largest positive difference and controls the charging current to decrease the largest positive difference to a zero difference.

11. (TWICE AMENDED) An electronic apparatus connected to an AC adapter which supplies DC power, capable of charging a battery by using power from the AC adapter while making a load operate by using the DC power supplied from the AC adapter, the power given to the load varying based on the state of the load, the electronic apparatus comprising:

a connector for receiving the DC power from the AC adapter;

a charger, connected to the battery, for supplying charging power to the battery by using the power from the connector; and

a charge control circuit for controlling the charger to control the charging power the charger supplies to the battery so that a sum of the power applied to the load and the power charged to the battery becomes a value assigned in advance.

130. (ONCE AMENDED) An electronic apparatus to supply power from a power converter to a battery and a load, the electronic apparatus comprising:

a control circuit to receive a control input and produce a regulating signal that regulates the power supplied to the battery, which regulating signal is regulated in accordance with the control input;

a charging current comparator to compare a battery charging current with a reference current and to vary the control input based on the comparison of charging current comparator;

a charging voltage comparator to compare a battery voltage with a reference voltage and to vary the control input based on the comparison of the charging voltage comparator;

a power converter regulator to vary the control input to limit the current drawn from the power converter to a power converter maximum output current; and

a charger to supply the power from the power converter to the battery based on said regulating signal.

131. (ONCE AMENDED) A battery charging apparatus to regulate power supplied to a battery from a power converter which also supplies power to a load, comprising:

a control circuit to receive a control input and produce a regulating signal that regulates the power supplied to the battery, which regulating signal is regulated in accordance with the control input;

a charging current comparator to compare a battery charging current with a

reference current and to vary the control input based on the comparison of charging current comparator;

a charging voltage comparator to compare a battery voltage with a reference voltage and to vary the control input based on the comparison of the charging voltage comparator;

a power converter regulator to vary the control input to limit the current drawn from the power converter to a power converter maximum output current; and

a charger to supply the power from the power converter to the battery based on said regulating signal.

132. (ONCE AMENDED). A battery charging control device to regulate power supplied to a battery from a power converter which supplies power to a load, comprising:

a control circuit to receive a control input and produce a regulating signal that regulates the power supplied to the battery, which regulating signal is regulated in accordance with the control input;

a charging current comparator compare a battery charging current with a reference current and to vary the control input based on the comparison of charging current comparator;

a charging voltage comparator to compare a battery voltage with a reference voltage and to vary the control input based on the comparison of the charging voltage comparator; and

a power converter regulator to vary the control input to limit the current drawn from the power converter to a power converter maximum output current.

Please ADD claims 133-147 as follows:

133. (NEW) An electronic apparatus connected to an AC adapter which supplies DC current, capable of charging a battery by using current from the AC adapter while making a load operate by using the DC current supplied from the AC adapter, the current given to the load varying based on the state of the load, the electronic apparatus comprising:

a connector connected to the Ac adapter, for receiving DC current from the AC adapter;

a charger, connected to the battery, for supplying charging current to the battery by using the current from the connector; and

a charger control circuit for controlling the charger to control the charging current the charger supplies to the battery so that a sum of the current applied to the load and the current

charged to the battery becomes a value assigned in advance.

134. (NEW) An electronic apparatus as set forth in claim 133, further comprising a charging current detector for detecting a charging current supplied to the battery, wherein the charge control circuit controls the charging current so that the charging current becomes equal to or lower than a value assigned to the battery, based on a value of the charging current to the battery detected by the charging current detector.

135. (NEW) An electronic apparatus as set forth in claim 133, further comprising a charging voltage detector for detecting a charging voltage supplied to the battery, wherein the control circuit controls the charging voltage so that the charging voltage becomes equal to or lower than a value assigned to the battery, based on a value of the charging voltage to the battery detected by the charging voltage detector.

136. (NEW) An electronic apparatus as set forth in claim 133, wherein the value assigned in advance is a maximum permissible supply current of the AC adapter.

137. (NEW) An electronic apparatus as set forth in claim 133, wherein the charge control circuit controls the charging current the charger supplies to the battery, based on sensed information on the power input from the connector, so that a sum of the current applied to the load and the current charged to the battery becomes the value assigned in advance.

138. (NEW) A charging apparatus for charging a battery for an electronic apparatus that is connected to an AC adapter and that is capable of charging the battery by using current from the AC adapter while the electronic apparatus making a load operate by using DC current supplied from the AC adapter, the current given to the load varying based on the state of the load, the charging apparatus comprising:

a charger, connected to the battery, for supplying charging current to the battery by using the current from a connector that is connected to the AC adapter to receive the DC current from the AC adapter; and

a charger control circuit for controlling the charger to control the charging current the charger supplies to the battery so that a sum of the current applied to the load and the current charged to the battery becomes a value assigned in advance.

139. (NEW) A charging apparatus as set forth in claim 138, wherein the charge control circuit controls the charging current so that a charging current becomes equal to or lower than the value assigned to the battery, based on a detected value of the charging current to the battery.

140. (NEW) A charging apparatus as set forth in claim 138, wherein the charge control circuit controls a charging voltage so that the charging voltage becomes equal to or lower than a value assigned to the battery, based on a detected value of the charging voltage to the battery.

141. (NEW) A charging apparatus as set forth in claim 138, wherein the value assigned in advance is a maximum permissible supply current of the AC adapter.

142. (NEW) A charging apparatus as set forth in claim 138, wherein the charge control circuit controls the charging current the charger supplies to the battery so that a sum of the current applied to the load and the current charged to the battery becomes the value assigned in advance, based on sensed information on input from the connector.

143. (NEW) A charge control circuit for controlling a charger in an electronic apparatus having a connector connected to an AC adapter to receive DC current from the AC adapter, the charger being connected to a battery and supplying charging current to the battery by using the current from the connector, the electronic apparatus making a load operate by using the DC current supplied from the AC adapter, the current given to the load varying based on the state of the load, the charge control circuit comprising:

a control circuit for controlling the charger to control the charging current the charger supplies to the battery so that a sum of the current applied to the load and the current charged to the battery becomes a value assigned in advance.

144. (NEW) A charge control circuit as set forth in claim 143, wherein the control circuit controls a charging current based on a detected value of the charging current to the battery so that the charging current becomes equal to or lower than a value assigned to the battery.

145. (NEW) A charge control circuit as set forth in claim 143, wherein the control circuit controls a charging voltage based on a detected value of the charging voltage to the battery so that the charging voltage becomes equal to or lower than a value assigned to the battery.

146. (NEW) A charge control circuit as set forth in claim 143, wherein the value assigned in advance is a maximum permissible supply current of the AC adapter.

147. (NEW) A charge control circuit as set forth in claim 143, wherein the control circuit controls the charging current the charger supplies to the battery, based on sensed information on input from the connector, so that a sum of the current applied to the load and the current charged to the battery becomes the value assigned in advance.